



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,476	10/17/2001	Timothy James Collins	IND10254	6045

22917 7590 06/15/2006

MOTOROLA, INC.
1303 EAST ALGONQUIN ROAD
IL01/3RD
SCHAUMBURG, IL 60196

EXAMINER

PENDLETON, DIONNE

ART UNIT	PAPER NUMBER
----------	--------------

2615

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,476

Applicant(s)

COLLINS ET AL.

Examiner

Dionne H. Pendleton

Art Unit

2615

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1 and 3-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. **Claims 1, 3 and 5-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Steeves (US 6,570,487)** in view of **Turner (US 6,549,119)** and further in view of **Meier (US 5,294,931)**.

Regarding claim 1, Steeves teaches a method, as inherently implied by the structure of the apparatus, comprising:

In **figure 3**, a flowchart, in which at step **307** a tag monitors RF activity, reading on "receiving a carrier signal";

and wherein **column 7, lines 40-44**, Steeves teaches that a tag **151**, normally in a low-power quiescent stand-by state, monitors the RF environment for an activation signal from a reader, as well as a request for data from the reader, reading on "continuously monitoring the carrier signal for a first predetermined condition, wherein receipt of the activation signal and a relevant request for data reads on "a first predetermined condition";

In **column 8, lines 5-26**, Steeves further teaches a method for determining time slot availability for data transmission from said tag, based upon RF traffic, once a

Art Unit: 2615

request for data has been determined relevant to a particular tag, which reads on “selecting a channel”.

Steeves does not clearly teach a specific method of transmitting data which includes continuously transmitting data on the selected channel and while transmitting data, continuously monitoring the carrier signal for a second predetermined condition; and ceasing the transmitting of data if the second predetermined condition is satisfied during transmitting of data.

Turner teaches a means for identifying transponders devices, which are well known in the art as being often incorporated into Tag devices for inventory/storage purposes. In **column 3, lines 47-column 4, line 4**, Turner teaches a tag identification system for transmitting data between a tag and a reader, wherein after a first predetermined condition is met such that a tag is “powered up” and the transmission of data from the tag to the reader is initiated, said tag will continuously send data to a reader device while continuously monitoring the RF environment for an ACK signal (*also, see the flowchart of figure 5, specifically steps 53 and 54*). Detection of said ACK signal is interpreted as reading on “a second predetermined condition”. Turner further teaches that during the data transmission “loop”, once said ACK signal is detected, no further responses/data transmissions are sent to the reader device, thereby reading on “ceasing the transmitting of the data...if the second predetermined condition is satisfied during the transmitting of data...”

The combination of Steeves and Turner fails to clearly teach that the first and second predetermined conditions, i.e., those conditions which cause the initiation and

termination of the transmission of data from said tag device to a reader device, may be related to power level thresholds.

In **column 2, lines 30-68**, Meier teaches that a plurality of transponders may be individually isolated for data recovery or disqualified from data recovery, as a function of the power level of a received interrogation pulse received from a reader device.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the methods for isolating tags devices for data transmission as taught by Steeves, Turner and Meier, thereby selectively activating and deactivating transponders/tag devices for data extraction so as to limit the number of simultaneously produced answer signals during an interrogation.

Regarding claim 3, in Meier's discussion of "Transponder 1", while the power level of the interrogation pulse exceeds the lower power level threshold, i.e. the first predetermined condition is satisfied, it also exceeds the upper power level threshold, i.e., the second predetermined condition is also satisfied. Therefore "Transponder 1" does not transmit data.

Regarding claim 5, In **column 2, lines 30-60**, Meier teaches threshold level for a transponder/tag may vary based upon its' location with respect to the origin of the interrogation pulse, and is therefore interpreted as teaching that the predetermined thresholds are "random".

Regarding claim 6, In **figure 2**, Steeves teaches at least a first device **151** comprising: a receiver **203** for receiving a carrier signal; in **column 7, lines 40-42**; Steeves teaches that the device monitors the RF environment for an activation signal and a *relevant* request for data, reading on “a monitor, coupled to the receiver, for continually monitoring the carrier signal for a first condition and a second condition”;

in **column 7, lines 58-64**, Steeves teaches that upon receipt of a request for information from the reader, each device *makes a determination* as to whether the request is relevant to the particular tag and if relevant, the tag *assembles a packet of data* for transmission, which reads on “a storage medium having data stored therein”; and In **figure 2**, Steeves teaches a transmitter **202**.

Steeves does not clearly teach the continuous transmission of at least a portion of data, and further configuring the device to cease the transmission of data when a second condition is satisfied during the transmitting of data.

In **column 3, lines 47-column 4, line 4**, Turner teaches a tag identification system for transmitting data between a tag and a reader, wherein after a first predetermined condition is met such that a tag is “powered up” and the transmission of data from the tag to the reader is initiated, said tag will continuously send data to a reader device while continuously monitoring the RF environment for an ACK signal (*also, see the flowchart of figure 5, specifically steps 53 and 54*). Detection of said ACK signal is interpreted as reading on “a second predetermined condition”. Turner further teaches that during the data transmission “loop”, once said ACK signal is detected, no further responses/data transmissions are sent to the reader device,

Art Unit: 2615

thereby reading on "ceasing the transmitting of the data...if the second predetermined condition is satisfied during the transmitting of data..."

The combination of Steeves and Turner fails to clearly teach that the first and second predetermined conditions, i.e., those conditions which cause the initiation and termination of the transmission of data from said tag device to a reader device, may be related to power level thresholds.

In **column 2, lines 30-68**, Meier teaches that a plurality of transponders may be individually isolated for data recovery or disqualified from data recovery, as a function of the power level of a received interrogation pulse received from a reader device.

It would have been obvious for one of ordinary skill in the art at the time of the invention to combine the methods for isolating tags devices for data transmission as taught by Steeves, Turner and Meier, thereby selectively activating and deactivating transponders/tag devices for data extraction so as to limit the number of simultaneously produced answer signals during an interrogation.

Regarding claim 7, in **column 7, lines 55-56 and lines 64-65**, Steeves teaches that the reader transmits a request to a single tag, to a subset of tags, or to any tag within range...the request may be for all tags corresponding, which reads on "wherein the first and second conditions of a first device are the same as the first and second conditions of a second device.

Regarding claims 8 and 10, In **claim 1, line 3-6**, Meier teaches "...only those transponders which have stored an amount of voltage which falls within their predetermined window, respond". Therefore, in the situation where at least two

Art Unit: 2615

transponders have identical response windows, Meier teaches that “the first and second devices transmit simultaneously.”

Regarding claim 9, Steeves further teaches that in given grouping of activated tags, one or more tags may not correspond to the request for relevancy, thereby reading on “the first and second conditions of a first device are different than the first and second conditions of a second device.

Regarding claim 11, In **column 7, lines 55-67**, Steeves teaches that the nature of the request of relevancy to the tag or tag grouping will vary i.e., not all tags may correspond to “fresh food crates”. Steeves therefore teaches that at least one of the first and second conditions are randomly assigned.

Regarding claim 12, Steeves teaches that more than one device may correspond to the relevancy request, i.e., more than one tag may correspond to “fresh food crates”, therefore in the case where tag devices corresponding to a particular category are “uniformly” stored, Steeves then teaches that “the second condition is uniformly distributed.”

Regarding claim 13, In **claim 1, line 3-6**, Meier teaches “...only those transponders which have stored an amount of voltage which falls within their predetermined window, respond”, thereby reading on “wherein the second condition is satisfied when the received power level exceeds a second threshold.”

Regarding claim 14, in **column 2, lines 33-34**, Turner teaches a continuous RF carrier signal, as claimed.

Art Unit: 2615

2. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Steeves (US 6,570,487)** in view of **Turner (US 6,549,119)** and further in view of **Meier (US 5,294,931)** as applied to claim 1 above, and further in view of **Carrender et al. (US 5,850,187)**.

Regarding claim 4, the combination of Steeves, Turner and Meier does not teach that the first predetermined condition is satisfied when a predetermined synchronization signal is received.

However, in **column 10, line 64 – column 11, lines 10**, Carrender teaches that in multi-channel systems, such as the system taught by Steeves, where two or more data channels are processed, the use of a synchronization signal is well known in the art. It would have been obvious for one of ordinary skill in the art at the time of the invention to alter the teachings of Steeves, Turner and Meier, per the teachings of Carrender, for the purpose of synchronizing data collection in the multi-channel data transmission systems.

Response to Arguments

3. Applicant's arguments with respect to claims 1 and 3-13 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne H. Pendleton whose telephone number is 571-272-7497. The examiner can normally be reached on 9-5:30 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on 571-272-7564. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2615

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dionne Pendleton



Daniel Swendlow
Primary Examiner
Au 2615